

## **Christine Forsythe Conrad**

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### **EDUCATION**

#### **Ph. D., Expected 2004**

**Virginia Institute of Marine Science:** Aquatic Geochemistry, Department of Physical Sciences. RESEARCH: Spectroscopic investigation of Pb(II) sorption at the  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>/water interface: A novel approach using planar oxides as proxies for natural sediment surfaces

#### **B.S., 1998**

##### **Coastal Carolina University:**

B.S. Chemistry, B.S. Marine Science, Mathematics minor, Honors Program, Magna Cum Laude, May 1998

THESIS: Characterization of Colloidal Metal Films for Surface-Mediated Photolysis.

### **WORK EXPERIENCE**

8/1999-8/2002

National Science Foundation Graduate Research Fellow, Virginia Institute of Marine Science, Gloucester Point, Virginia

1998-present

Graduate Research Assistant, Aqueous Geochemistry, Department of Physical Sciences, Virginia Institute of Marine Science, Gloucester Point, Virginia

1997-1998

Undergraduate Research Assistant, Department of Chemistry and Physics, Coastal Carolina University, Conway, South Carolina

6/1996-8/1996

National Science Foundation Research Experience for Undergraduates Intern, Environmental Chemistry Group, Virginia Institute of Marine Science, Gloucester Point, Virginia, project title: "Optimization and characterization of extracellular acid phosphatase(s) activity of the protozoan parasite *Perkinsus marinus*"

### **PUBLICATIONS AND PRESENTATIONS**

**Conrad, C. F.**, Chisholm-Brause, C. J., and Kelley, M. J. (2002) Pb(II) sorption onto  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> surfaces at the oxide-water interface: a novel approach using planar oxides. *Journal of Colloid and Interface Science*, 248:275-282.

Chisholm-Brause, C. J., **C. F. Conrad**, and R. Greene-Roesel. Spatial variability in the distributions of trace metals among geochemical fractions in the Elizabeth River subestuary, Virginia. Submitted 2003.

**Conrad, C. F.**, Chisholm-Brause, C. J., and Kelley, M. J. Planar oxides: a novel approach to investigating metal-ion sorption in natural systems. 39<sup>th</sup> Annual Meeting of the Clay Minerals Society, Boulder, CO, June 8-13, 2002.

**Conrad, C. F.,** C. J. Chisholm-Brause, and M. J. Kelley. Planar oxides as proxies for natural sediment surfaces. 2<sup>nd</sup> International Conference of Thin Films, Surfaces, and Materials Processing, Applied Research Center, Newport News, VA, June 6-8, 2001.

**Conrad, C.F.,** C. J. Chisholm-Brause, J. Daus, D. Fugate, S. A. Kuehl. Historical trends in trace metal contaminants of the Elizabeth River subestuary, Chesapeake Bay, Virginia. National American Chemical Society Meeting, Washington D. C., August 21-24, 2000.

Chisholm-Brause, C. J., **C. F. Conrad,** and M. E. Kelley. Planar oxides as proxies for sediment particle surfaces in metal ion sorption studies. National American Chemical Society Meeting, Washington, D. C., August 21-24, 2000.

**Conrad, C. F.,** R. A. Greene-Roesel, and C. J. Chisholm-Brause. Factors affecting contaminant metal distributions in the Elizabeth River estuary, Virginia. Estuarine Research Federation 15<sup>th</sup> Biennial International Conference Proc. New Orleans, Louisiana, September 25-30, 1999.

**Forsythe, C. M.** and B. D. Gilbert. Characterization of colloidal metal films for surface-mediated photolysis. National American Chemical Society Meeting Proc. Dallas, Texas, March 29-April 2, 1998.

**Forsythe, C. M.** and B. D. Gilbert. Characterization of colloidal metal films for surface-mediated photolysis. 49<sup>th</sup> Southeast Regional American Chemical Society Meeting. Roanoke, Virginia, October 19-22, 1997.

**Forsythe, C. M.,** A. K. Volety, and F. E. Chu (1997). Extracellular acid phosphatase(s) activity of the protozoan parasite *Perkinsus marinus*. *Proceedings Eleventh National Conference on Undergraduate Research*, Robert D. Yearout, ed., **5**:1866-1870.

Volety, A. K., **C. M. Forsythe,** F. E. Chu. Optimization and characterization of extracellular acid phosphatase(s) activity of the protozoan parasite *Perkinsus marinus*. 21<sup>st</sup> Annual Eastern Fish Health Workshop. Virginia Institute of Marine Science, Gloucester Point, Virginia, September 5-6, 1996.

### **GRANTS AND FELLOWSHIPS**

- National Science Foundation Graduate Research Fellowship- \$25,000/year for 3 years; 4,796 applicants, 32 awards offered in Geosciences – 1999-2002
- Virginia Water Resources Research Center Grant (\$2,650) – 2002
- Clay Minerals Society Student Research Grant (\$2,250) – 2002
- VIMS GSA Mini-Grant Recipient (\$500) – 2000

### **PROFESSIONAL MEMBERSHIPS**

American Chemical Society: 1998 – present

Mineralogical Society of America: 2000 – present

The Clay Minerals Society: 2002 – present  
Sigma Xi Scientific Research Society: 1997 - present

### **HONORS AND AWARDS**

#### **Graduate:**

- Craig L. Smith Memorial Scholarship – 2003; Provides assistance to an academically distinguished graduate student at VIMS
- National Science Foundation Graduate Research Fellowship- \$25,000/year for 3 years; 4,796 applicants, 32 awards offered in Geosciences
- Clay Minerals Society Student Research Grant (\$2,250) – 2002
- Virginia Water Resources Research Center Grant (\$2,650) - 2002
- VIMS GSA Mini-Grant Recipient (\$500) – 2000
- Department of Defense Graduate Fellowship Honorable Mention - 1999
- Graduate Research Assistantship - 1998-present

#### **Undergraduate:**

- National Science Foundation Graduate Research Fellowship Honorable Mention - 1998
- Department of Defense Graduate Fellowship Honorable Mention - 1998
- President's Honor's List - 1995 (Fall), 1998 (Spring)
- Dean's Honor's List - 1994-1998
- Coastal Carolina University Honors Program - 1994-1998
- Finalist for Outstanding Student of the Year award – 1998
- President and Founder of Coastal Carolina University's chapter of the Student Affiliates of the American Chemical Society - 1997-1998
- Outstanding Chemistry Student of the Year award - 1997
- Council for Undergraduate Research (CUR) Grant Alternate – 1997
- National Science Foundation Research Experience for Undergraduates (NSF/REU) scholar - 1996
- Sigma Zeta National Math and Science Honor Society - 1996-Present
- Phi Eta Sigma National Freshman Honor Society - Treasurer, 1996; Vice President, 1997; President, 1998
- Omicron Delta Kappa National Leadership Honor Society - 1996-Present
- Pi Mu Epsilon National Mathematics Honor Society - 1997-Present
- Who's Who Among Students in American Colleges and Universities - 1996

### **MENTORSHIPS**

- Susan Tomes (undergraduate intern, College of William & Mary), project title: “Spatial variability and tidal influences on trace contaminant metals in the suspended sediments of the Elizabeth river, Virginia”, summer-fall 2000.
- Janice Daus (high school intern), project title: “Historical trends in trace metal contaminants of the Elizabeth river subestuary, Chesapeake Bay, Virginia”, summer 1999.

- Ryan Roessel-Green (NSF/REU intern, College of William & Mary), project title: “Spatial variability in the distributions of trace metals among geochemical fractions in the Elizabeth River subestuary, Virginia”, summer 1998.
- Suzanne Palmer (high school intern), project title: “Surface area analysis of sediments from the channels and shoals of the Elizabeth River, Virginia”, summer 1998.

### **SERVICE POSITIONS**

- College of William & Mary School of Marine Science Honor Council Representative - 2000 – present
- College of William & Mary School of Marine Science Distance Learning Representative – 2003-present
- College of William & Mary School of Marine Science Educational Policy Committee Student Representative - 2000-2001
- Volunteer Judge for a local High School Science Fair, Chemistry & Environmental Science Divisions - 2000
- Dean's Student Advisory Committee (Coastal Carolina University School of Natural and Applied Sciences) - 1997-1998
- Coastal Carolina University Department of Chemistry and Physics Search Committee Student Representative - 1997-1998